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EXAMINER	
FIGUEROA, MARISOL	

ART UNIT	PAPER NUMBER
2617	

DATE MAILED: 05/04/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/803,032	ELLIOTT, BRIG BARNUM	
	Examiner	Art Unit	
	Marisol Figueroa	2617	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *14 February 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,3,5-10,13-18 and 21-33* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,3,5-10,13-18 and 21-33* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. The Art Unit location of your application in the USPTO has changed. To aid in correlating any papers for this application, all further correspondence regarding this application should be directed to Art Unit 2617.

Response to Amendment

2. This Action is in response to Applicant's amendment filed on 03/18/2004. Claims 1, 10, 18, 28, and 33 have been amended. Claims 2, 4, 11, 12, 19, and 20 have been cancelled. Claims 1, 3, 5-10, 13-18, 21-33, are still pending in the present application.

Remarks

3. The indicated allowability of claims 4, 12, 16, and 20 is withdrawn in view of the newly discovered reference(s) and in light of new interpretations of the claims. For example, in claim 1, the limitation "wherein the switch includes an ad-hoc router" does not renders the claim allowable. The claim limitations does not indicate that the ad-hoc router is performing a function, just includes an ad-hoc router. Furthermore, the claim does not distinctly define an ad-hoc router. The rejection is as follows.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. **Claims 1, 3, 5, and 9** are rejected under 35 U.S.C. 103(a) as being unpatentable over Farris et al. (US 5,751,789) in view of Minarczik et al. (US 5,790,631).

Regarding claims 1 and 3, Farris discloses a device (Smart Network Interface Device SNID or wireless-to-landline interface) for enabling network connectivity with a service provider, the device comprising:

a wireless transceiver (Figure 2, cellular transceiver 51);

an antenna coupled to the wireless transceiver (Figure 2, antenna 25); and

a switch coupled to the wireless transceiver and to a wireline network (Figure 2; col.2, lines 32-35; col.8, lines 7-9; switch 45), the switch exchanging data with the network service provider over the wireline network during normal operation and exchanging data with the network service provider via the wireless transceiver when the connectivity is lost on the wireline network (col.3, lines 9-45; col.6, lines 31-51; col.8, lines 54-62; the switch has two latched states, normal line-connected state (1) in which the switch is connected to the active twisted pair of the customer premises and changes to a second state (2) in where the active twisted pair is connected to the land-line-to-cellular interface, the switch connects the active twisted pair to the land-line interface when a fault is detected to exchange information with the local serving mobile telephone switching office (MTSO) of a wireless communication network).

But, Farris fails to disclose wherein the wireless transceiver is configured to relay data from other wireless transceivers that have lost connectivity to the wireline network and wherein the wireless transceiver relays the data from the other wireless transceivers that have lost connectivity by forwarding data units received from the other wireless transceivers through the switch and to the wireline network. However, relaying a wireline connection via other subscribers in well known in the art and Minarczik is evidence of the fact. Minarczik discloses a method in which a wireless

transceiver connects to a telephone line network terminal, in place of a disabled drop cable (abstract, lines 1-2); as shown in figure 2, a temporary repair is made using wireless transceivers. A wireless transceiver is positioned in the customer premises of the disabled drop cable which communicates with a wireless transceiver positioned in the customer premises of a subscriber with an enabled telephone line connection, this permit a person at the premises of a disable cable to make and receive calls using the standard telephone station equipment (col.6, lines 5-17, 34-42, 52-59). Therefore, it would have been obvious to a person having ordinary skill in the art at the time of the invention for the wireless transceiver be configured to relay data from other wireless transceivers that have lost connectivity to the wireline network as suggested by Minarczik, the motivation being to provide a temporary wireline service from the neighbor's wireline equipment.

Also, the combination of Farris and Minarczik fails to specifically disclose wherein the switch includes an ad-hoc router. However, based on the ad-hoc definition given in the specification, which merely defines an "ad-hoc router" as a device that routes data via the best way (paragraph 0034), the transceiver numeral 51, shown in figure 2 of Farris, and the transceivers numerals 25 and 29, shown in figure 2 of Minarczik, are fairly characterized as ad-hoc routers because they route the communication to the end office switching system via the best way.

Regarding claim 5, the combination of Farris and Minarczik disclose the device of claim 1, Farris discloses wherein the device is physically located at a location of a subscriber of the network service provider (col.4, lines 18-21).

Regarding claim 9, the combination of Farris and Minarczik disclose the device of claim 1, Farris discloses wherein the switch monitors a failed connection state of the wireline network for renewed connectivity of the wireline network and resumes communication over the wireline network when the wireline connection is renewed (col.10, lines 41-56).

6. **Claim 6** is rejected under 35 U.S.C. 103(a) as being unpatentable over Farris et al. in view of Minarczik et al., and further in view of well known Prior Art (MPEP 2144.05).

Regarding claim 6, the combination of Farris and Minarczik disclose the device of claim 1, Farris further teaches that a variety of wireless transceivers could be used (col.7, lines 13-23), however fails to specifically teach wherein the wireless transceiver operates in accordance with IEEE 802.11 standards. The Examiner takes official notice of the fact that is notoriously well known in the art that the IEEE 802.11 standard is a wireless network technology. Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention to include a wireless transceiver in accordance with IEEE 802.11 standards in Farris' invention since is one of a variety of wireless transceivers used to create wireless local area networks and Farris' invention will perform equally well as with using a cellular transceiver, since Farris indicates that his invention is not restricted to using only a cellular transceiver.

7. **Claim 7** rejected under 35 U.S.C. 103(a) as being unpatentable over Farris et al. in view of Minarczik et al., and further in view of Ehreth (US 6,246,750 B1).

Regarding claim 7, the combination of Farris and Minarczik disclose the device of claim 1, but fail to disclose wherein the wireline network includes a fiber network. Ehreth teaches that telecommunication systems using fiber optic cable transmit communication signals are becoming increasingly prevalent due to the enormous advantages that fiber-optic technology provides (col.1, lines 25-31). Therefore, it would have been obvious to a person having ordinary skill in the art at the time of the invention for a wireline network to include a fiber network as suggested by Ehreth, because telecommunication system using fiber optic cables have enormous advantages over copper-wire based systems such as larger bandwidth and improved signal quality.

8. **Claim 8** is rejected under 35 U.S.C. 103(a) as being unpatentable over Farris et al. in view of Minarczik et al, and further in view of McKenna et al. (US 6,829,486 B2).

Regarding claim 8, the combination of Farris and Minarczik disclose the device of claim 1, but fail to disclose wherein the wireline network includes coaxial cables. McKenna teaches that wirelined-based communications networks such as traditional telephone systems, Local Area Networks, and the like, can use a variety of physical media to interconnect wired subscribers devices to the wirelined-based communication network and these include: twisted pair, Ethernet, coaxial cable, fiber optic cable, DSL on twisted pair, 4-wire, and the like (col.9, lines 31-59). Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention to include coaxial cables in a wireline network as taught by McKenna, because coaxial cables is one of the variety of physical media used to interconnect subscribers in a wirelined-based communication network.

9. **Claims 10, 14, 15, 16, and 17** are rejected under 35 U.S.C. 103(a) as being unpatentable over Cardina et al. (US 2004/0214569 A1) in views of Minarczik et al., and Sendrowicz (US 2003/0134598 A1).

Regarding claim 10, Cardina discloses a method performed by a network subscriber comprising: establishing connectivity to a network service provider over a wireline connection (P.0038, lines 1-9; note that when there is no interruptions in the subscriber's landline, i.e. wireline, connection there is a direct connection with the network service provider over the landline connection); monitoring the wireline connection for failure (P.0038, lines 1-9; the backup device detects service interruptions in the subscriber's landline, thus it is inherent the landline connection is monitored); and automatically establishing a connection to the network service provider over a

wireless connection (P.0069-0071; Figure 1; the backup device 102, provides wireless communication service through the Mobile Telephone Switching Office which is connected to the Public Switched Telephone Network).

But, Cardina fails to disclose wherein the wireless connection is relayed via one or more other subscribers when the wireline connection fails. However, relaying the wireline connection via other subscribes is well known in the art and Minarczik is evidence of the fact. Minarczik teaches that a disabled subscriber drop is replaced with a wireless transceiver for connecting to the wireline service via a transceiver positioned at the neighbor premises for temporarily obtaining wireline service from the neighbor's wireline connection (see Fig. 2; col.6, lines 5-17, 34-42, 52-59). Therefore, it would have been obvious to a person having ordinary skill in the art at the time of the invention, to establish a wireless connection to the service provider relayed via other network subscribers when the wireline connection fails as suggested by Minarczik, the motivation being to provide a temporary wireline service from the neighbor's wireline equipment.

The combination of Cardina and Minarczik fails to disclose wherein the wireless connection is established over multi hops in an ad-hoc network formed via a plurality of network units. However, establishing multi hops in an ad-hoc network is known in the art as taught by Sendrowicz. Sendrowicz teaches an ad-hoc communication network among a plurality of houses (see Fig. 1b) comprising a household consumption meter with a transceiver for relaying information within neighboring meters. Information such as household consumption value HCV from each meter propagates from meter to meter until it reaches a central station, establishing a multi hop relaying path (see p.104-0109). Therefore, it would have been obvious to a person having ordinary skill in the art at the time of the invention, to establish multi hops in an ad-hoc network formed via a plurality

of units as suggested by Sendrowicz, in order to propagate the wireline service via a plurality of neighboring houses.

Regarding claim 14, the combination of Cardina, Minarczik, and Sendrowicz disclose the method of claim 10, Cardina discloses wherein automatically establishing a connection to the network service provider includes wirelessly broadcasting a message requesting a relay to the network service provider by the one or more other network subscribers (P.0011-0012; the backup devices send a message to register with the mobile telephone switching office to forward communication through the wireless network).

Regarding claim 15, the combination of Cardina, Minarczik, and Sendrowicz disclose the method of claim 14, Cardina discloses wherein automatically establishing a connection to the network service provider further includes authorizing the subscriber to use the network (P.0011-0012; the backup device sends a message to register with the mobile telephone switching office to forward communication through the wireless network; note that registration involves authorization from the network to be allowed to use the network).

Regarding claim 16, the combination of Cardina, Minarczik, and Sendrowicz disclose the method of claim 14, but the combination Cardina and Minarczik fails to disclose wherein the relaying one or more other network subscribers forward data received wirelessly from the network subscriber over a second wireless connection to the network service provider. However, Sendrowicz teaches that in an ad-hoc network information may be relayed over multiple wireless connection until it reaches its final destination (see Fig. 1a; P.0104-0109). Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention, to forward data received wirelessly from the network subscribers over a second wireless connection to the network provider, as suggested by Sendrowicz, in order for one subscriber to reach the network provider via a second

wireless connection even when there is no direct path from a first subscriber to the network provider via a first wireless connection.

Regarding claim 17, the combination of Cardina, Minarczik, and Sendrowicz disclose the method of claim 10, Cardina discloses further comprising: monitoring a failed connection state of the wireline connection for renewed connectivity of the wireline connection; and disconnecting from the wireless connection when the wireless connection is renewed (P.0015, lines 1-6).

10. **Claim 13** is rejected under 35 U.S.C. 103(a) as being unpatentable over Cardina et al. in views of Minarczik et al., and Sendrowicz, and further in view of well known prior art (MPEP 2144.05).

Regarding claim 13, the combination of Cardina, Minarczik, and Sendrowicz disclose the method of claim 10, but fails to teach wherein the wireless network is formed in accordance with IEEE 802.11 wireless connectivity standards. The Examiner takes official notice of the fact that is notoriously well known in the art that the IEEE 802.11 standard is a wireless network technology. Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention to form a wireless network in accordance with IEEE 802.11 standards in Cardina's invention since is one of a variety of wireless networks available to create wireless local area networks and more cost effective compared to other wireless networks.

11. **Claims 18, and 23-26** are rejected under 35 U.S.C. 102(e) as being anticipated by Cardina et al. in view of Sendrowicz.

Regarding claim 18, Cardina discloses a method for providing fallback network connectivity to a network service provider comprising:

providing primary network connectivity over a wireline connection (Figure 1; P.0058, lines 1-4; landline connection 101 between the customers premises equipment 106 and the public switched telephone network (PSTN) 108 of the landline network); and providing backup network connectivity via a wireless network implemented over a plurality of network nodes located at residences of subscribers of the network service provider (P.0009; P.0059; the backup devices communicates through the MTSO that interfaces with the PSTN when there is interruption of the landline telephone service interruption).

But, Cardina fails to disclose wherein the wireless network includes an ad-hoc network and the backup network connectivity is established over multiple hops in the ad-hoc network wireless network. However, establishing multi hops in an ad-hoc network is known in the art as taught by Sendrowicz. Sendrowicz teaches an ad-hoc communication network among a plurality of houses (see Fig. 1b) comprising a household consumption meter with a transceiver for relaying information within neighboring meters. Information such as household consumption value HCV from each meter propagates from meter to meter until it reaches a central station, establishing a multi hop relaying path (see p.104-0109). Therefore, it would have been obvious to a person having ordinary skill in the art at the time of the invention, to establish multi hops in an ad-hoc network formed via a plurality of units as suggested by Sendrowicz, in order to propagate the wireline service via a plurality of neighboring houses.

Regarding claim 23, the combination of Cardina and Sendrowicz disclose the method of claim 18, Cardina discloses wherein providing the backup network connection includes authorizing the subscriber of the network with the network service provider (P.0011-0012; the backup device sends a message to register with the mobile telephone switching office to forward communication

through the wireless network; note that registration involves authorization from the network to be allowed to use the network).

Regarding claim 24, the combination of Cardina and Sendrowicz disclose the method of claim 18, Cardina discloses further comprising: providing the backup network connectivity in response to a failed connection state of the wireline connection (P.0011, lines 1-8).

Regarding claim 25, the combination of Cardina and Sendrowicz disclose the method of claim 24, Cardina discloses further comprising: monitoring failed connection state of the wireline connection for renewed connectivity of the wireline connection; and disconnecting from the backup network connectivity when the wireline connection is renewed (P.0015, lines 1-6).

Regarding claim 26, the combination of Cardina and Sendrowicz disclose the method of claim 18, Cardina disclose wherein the network service provider provides Internet connectivity or telephony services (Figure 1, the network service provider is a Public Switched Telephone Network (PSTN)).

12. **Claim 22** is rejected under 35 U.S.C. 103(a) as being unpatentable over Cardina et al. in view of Sendrowicz, and further in view of well known Prior Art (MPEP 2144.05).

Regarding claim 22, the combination of Cardina and Sendrowicz disclose the method of claim 18, but fails to teach wherein the wireless network is formed in accordance with IEEE 802.11 wireless connectivity standards. The Examiner takes official notice of the fact that is notoriously well known in the art that the IEEE 802.11 standard is a wireless network technology. Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention to form a wireless network in accordance with IEEE 802.11 standards in Cardina's invention since is one of a variety of wireless networks available to create wireless local area networks and more cost effective compared to other wireless networks.

13. **Claim 27** is rejected under 35 U.S.C. 103(a) as being unpatentable over Cardina et al. in view of Sendrowicz, and further in view of McKenna et al. (US 6,829,486 B2).

Regarding claim 27, the combination of Cardina and Sendrowicz disclose the method of claim 18, but fails to disclose wherein the wireline network includes a fiber connection or a coaxial connection leading to a subscriber of the network service provider. McKenna teaches that wirelined-based communications networks such as traditional telephone systems, Local Area Networks, and the like, can use a variety of physical media to interconnect wired subscribers devices to the wirelined-based communication network and these include: twisted pair, Ethernet, coaxial cable, fiber optic cable, DSL on twisted pair, 4-wire, and the like (col.9, lines 31-59). Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention to include a fiber connection or coaxial connection in a wireline network as taught by McKenna, because fiber and coaxial cables are one of the variety of physical media used to interconnect subscribers in a wirelined-based communication network.

14. **Claim 21** is rejected under 35 U.S.C. 103(a) as being unpatentable over Cardina et al. in view of Sendrowicz, and further in view of Minarczik et al.

Regarding claim 21, the combination of Cardina and Sendrowicz disclose the method of claim 18, but fails to disclose the step of providing the backup network connectivity by relaying data to a first node in the wireless network that has an active wireline connection to the network service provider. However, relaying a wireline connection via other subscribes is well known in the art and Minarczik is evidence of the fact. Minarczik teaches that a disabled subscriber drop is replaced with a wireless transceiver for connecting to the wireline service via a transceiver positioned at the neighbor premises for temporarily obtaining wireline service from the neighbor's wireline

connection (see Fig. 2; col.6, lines 5-17, 34-42, 52-59). Therefore, it would have been obvious to a person having ordinary skill in the art at the time of the invention, to provide backup network (i.e. temporary connection) to the service provider relayed via other network subscribers that has an active wireline connection, as suggested by Minarczik, the motivation being to provide a temporary wireline service from the neighbor's wireline equipment.

15. **Claims 28, 30-32** are rejected under 35 U.S.C. 103(a) as being unpatentable over Farris et al. in view of Minarczik et al.

Regarding claim 28, Farris discloses a network comprising: wireline connections to a plurality of subscribers (note that it is conventional to provide wireline connections of telephone services to a plurality of subscribers); network interface units (NIUs) located at the plurality of subscribers (col.2, lines 40-45; col.4, lines 18-21; note that if there is a plurality of subscribers each will contain a network interface unit, i.e. SNID), the NIUs each including:

a wireless transceiver (col.4, lines 26-28; Figure 2; cellular transceiver 51); and a switch coupled to the wireless transceiver and to one of the wireline connections (Figure 2; col.2, lines 32-35; col.8, lines 7-9; switch 45), the switch providing data from one of the wireline connections to a corresponding subscriber of the network during normal operation of the one of the wireline connections and the switch providing data from the wireless transceiver to the corresponding subscriber of the network when connectivity on the one of the wireline connections fail (col.3, lines 9-45; col.6, lines 31-51; col.8, lines 54-62; the switch has two latched states, normal line-connected state (1) in which the switch is connected to the active twisted pair of the customer premises and changes to a second state (2) in where the active twisted pair is connected to the land-line-to-cellular interface, the switch is connects the active twisted pair to the land-line interface when a fault is detected to exchange information with the local serving mobile telephone switching office (MTSO)

of a wireless communication network). Farris fails to disclose wherein the wireless transceivers are configured to communicate with other NIUs. However, is well known that wireless transceivers can communicate with each other, therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention to recognize that the network interfaces NIUs of different subscribers communicates with each other sine it is well known that wireless transceiver are configured to exchange data.

However, Farris fails to disclose wherein the wireless transceiver is configured to relay data from other wireless transceivers that have lost connectivity to the wireline network and wherein the wireless transceiver relays the data from the other wireless transceivers that have lost connectivity by forwarding data units received from the other wireless transceivers through the switch and to the wireline network. In the same field of endeavor, Minarczik discloses a method in which a wireless transceiver connects to a telephone line network terminal, in place of a disabled drop cable (abstract, lines 1-2); as shown in figure 2, a temporary repair is made using wireless transceivers. A wireless transceiver is positioned in the customer premises of the disabled drop cable which communicates with a wireless transceiver positioned in the customer premises of a subscriber with an enabled telephone line connection, this permit a person at the premises of a disable cable to make and receive calls using the standard telephone station equipment (col.6, lines 5-17, 34-42, 52-59). Therefore, it would have been obvious to a person having ordinary skill in the art at the time of the invention for the wireless transceiver be configured to relay data from other wireless transceivers that have lost connectivity to the wireline network as suggested by Minarczik, the motivation being to provide a temporary wireline service from the neighbor's wireline equipment.

Also, the combination of Farris and Minarczik fails to specifically disclose wherein the switch includes an ad-hoc router. However, based on the ad-hoc definition given in the

specification, which merely defines an "ad-hoc router" as a device that routes data via the best way (paragraph 0034), the transceiver numeral 51, shown in figure 2 of Farris, and the transceivers numerals 25 and 29, shown in figure 2 of Minarczik, are fairly characterized as ad-hoc routers because they route the communication to the end office switching system via the best way.

Regarding claim 30, the combination of Farris and Minarczik disclose the network of claim 28, Farris discloses wherein the NIUs each additionally include an antenna coupled to the wireless transceiver (Figure 2, antenna 25).

Regarding claims 31 and 32, the combination of Farris Minarczik disclose the method of claim 28, Minarczik teaches wherein the wireless transceiver is configured to relay data from other wireless transceivers that have lost connectivity with the wireline connections and wherein the wireless transceiver relays the data from the other wireless transceivers that have lost connectivity by forwarding data units received from the other wireless transceivers through the switch and to the wireline network (see Fig. 2; col.6, lines 5-17, 34-42, 52-59). Therefore, it would have been obvious to a person having ordinary skill in the art at the time of the invention for the wireless transceiver be configured to relay data from other wireless transceivers that have lost connectivity to the wireline network as suggested by Minarczik, the motivation being to provide a temporary wireline service from the neighbor's wireline equipment.

16. **Claim 29** is rejected under 35 U.S.C. 103(a) as being unpatentable over Farris et al. in view of Minarczik, and further in view of Patron et al. (US 2005/0063333 A1).

Regarding claim 29, the combination of Farris and Minarczik disclose the network of claim 28, but fails to disclose wherein the NIUs form an ad-hoc network. Patron teaches that Ad-hoc networks usually consist of several computing devices each equipped with a wireless transceiver (P.0001). Therefore, it would have been obvious to one having ordinary skill in the art at the time of

the invention to recognize that an ad-hoc network forms between the plurality of NIUs as taught by Patron, because Ad-hoc networks usually consists of devices comprising wireless transceivers and each NIU comprises a wireless transceiver.

17. **Claim 33** is rejected under 35 U.S.C. 103(a) as being unpatentable over Farris et al. in view of Sendrowicz.

Regarding claim 33, Farris discloses a device comprising (Figure 2; smart network interface device SNID):

means for establishing connectivity to a network service provider over a wireline connection (Abstract, lines 1-3; col.2, lines 42-45, 63-66; the wireless-to-landline interface or SNID connects to a telephone line service of a landline network);

means for monitoring the wireline connection for failure (col.2, lines 42-45; col.3, lines 9-13; Line Fault Detector); and

means for automatically establishing a connection to the network service provider over a wireless connection when the wireline connection fails (col.3, lines 9-45; when the detector detects a fault, automatically notifies the controller of the fault and the controller activates the switch to connect to the wireless-to-landline interface to exchange information with the local serving mobile telephone switching office (MTSO) via wireless transmission).

But, Farris fails to disclose wherein the wireless connection is established over multiple hops in an ad-hoc network formed via a plurality of network units. However, establishing multi hops in an ad-hoc network is known in the art as taught by Sendrowicz. Sendrowicz teaches an ad-hoc communication network among a plurality of houses (see Fig. 1b) comprising a household consumption meter with a transceiver for relaying information within neighboring meters.

Information such as household consumption value HCV from each meter propagates from meter to meter until it reaches a central station, establishing a multi hop relaying path (see p.104-0109). Therefore, it would have been obvious to a person having ordinary skill in the art at the time of the invention, to establish multi hops in an ad-hoc network formed via a plurality of units as suggested by Sendrowicz, in order to propagate the wireline service via a plurality of neighboring houses.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Marisol Figueroa whose telephone number is (571) 272-7840. The examiner can normally be reached on Monday Thru Friday 8:30 a.m. - 5:00 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lester G. Kincaid can be reached on (571) 272-7922. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Marisol Figueroa
Art Unit 2617

LESTER G. KINCAID
SUPERVISORY PRIMARY EXAMINER